

The teeth are in sockets placed obliquely, with conical crowns compressed to sharp lateral margins, and curved inward. The proportions of the vertebral column are those of *Echidna*, though the transverse processes are longer, as in *Pariasaurus*. The ribs are like those of a Monotreme, though the sacral ribs are longer. The shoulder-girdle resembles that of *Procolophon*, and differs from typical Anomodonts in the constituent bones being unanchylosed, and in the precoracoid having a large anterior extension in advance of the scapula. The sternum appears to have been unossified, as in Crocodilia. The humerus is widely expanded at both extremities and twisted, but does not show the peculiar lateral curvature seen in Monotremes. The ulna gives no evidence of an olecranon-process; it is larger than the radius, and appears to articulate with the humerus. The pelvic bones are without acetabular or obturator-perforations, are not anchylosed together, and the ilium is not expanded transversely. The hind-limb is no larger than the fore-limb. The femur is more slender than the similar bone in *Echidna*. The fibula is prolonged proximally beyond the stout tibia, round which it may rotate. The proximal row of the tarsus is one large bone, formed of the blended astragalus and os calcis.

In conclusion, the Author argues that the points of structure are so few in which Monotreme mammals make a closer approximation to the higher mammals than is seen in this fossil and other Anomodontia, that the Monotreme resemblances to fossil reptiles become increased in importance. He believes that a group Theropsida might be made to include Monotremata and Anomodontia, the principal differences (other than those of the skull) being that Monotremes preserve the marsupial bones and the atlas vertebra. *Ornithorhynchus* shows pre-frontal and post-frontal bones, and has the malar arch formed as in Anomodonts and some other reptiles.

MISCELLANEOUS.

The Dates of Esper's 'Schmetterlinge.' By C. DAVIES SHERBORN.
F.Z.S. &c., and B. B. WOODWARD, F.L.S. &c.

THE following incomplete notes (pp. 138-140) on the dates of E. J. C. Esper's 'Die europäischen Schmetterlinge in Abbildungen' &c., collected over several years, may be useful to students until further information be forthcoming. We have to thank Mr. L. B. Prout for some valuable memoranda, the references "A. V." (=Allgemeines Verzeichniss derer Bucher, &c.: Leipzig, Weidmann) coming from his manuscripts. "G. A." signifies "Göttingische gelehrte Anzeigen." The dates in square brackets are doubtful and are those used by Mr. Sherborn in his 'Index Animalium.'

The dates of Esper's 'Die ausländischen (aussereurop.) Schmetterlinge' have been published by Prof. Aurivillius in K. Vet.-Ak. Handl. xix. (5) 1882, p. 182. We think the date of the last three parts (14-16, pp. 205-254) will be found to be 1798. The 1801 titlepage belongs to the so-called second edition.

Th. I.	Heft 1	1-28-40	pls.	1-6	1777	Announced A. V., Michaelmesse, 1776, p. 159.
	2	41-72		7-12	"	
	3	73-104		13-18	"	G. A. 1777, pp. 618-622.
	4	105-116 *		19-24	"	
	5	117-144		25-30	"	G. A. 1779, pp. 1256-8.
	6	145-168		31-36	"	
	7	169-192]		37-42	"	G. A. 1781, p. 24. G. A. 1784, p. 823; A. V., Oster, 1781, p. 89. G. A. 1783, pp. 551-2.
		Sheet Bb=pp. 193-200 with Heft 28.			"	
	8	201-216		43-48	1788	G. A. 1784, p. 784.
	9	207-388		49-50	1779	
Th. II.	Heft 10	1-		1-6	1778	G. A. 1786, pp. 925-7.
	11	-		7-12	1779	
	12	- 80		13-18	"	G. A. 1788, pp. 324-6.
	13	81-104		19-24	1780	
	14	105-196		25-30	1781	A. V., Oster, 1787, p. 603.
	15	1-32		1-6	1782	
Th. III.	Heft 15	33-56		7-12	1783	G. A. 1792, pp. 652-3.
	16	57-88		13-17	"	
	17	89-104		18-23	"	G. A. 1785, pp. 324-6.
	18	105-136		24-31	1784	
	19	137-184		32-37	1785	G. A. 1786, pp. 925-7.
	20	185-208		38-43	"	
	21	209-240		44-49	"	G. A. 1788, pp. 324-6.
	22	241-272		50-55	"	
	23	273-288		56-61	1786	A. V., Oster, 1787, p. 603.
	24	289-312		62-67	"	
	25	313-328		68-73	"	G. A. 1792, pp. 652-3.
	26	329-344		74-79	"	
	27	345-396	(with pl. 113 and Sheet Bb of Th. i., and pl. 36, sheet Gg of Th. ii.).		"	G. A. 1788, pp. 324-6.
	28				"	
Th. IV. Bd. 1, Heft 29		1-16		80-85	"	A. V., Oster, 1787, p. 603.
	30	17-32		86-91	"	
	31	33-48		92-97	1787	G. A. 1788, pp. 324-6.
	32	49-64		98-103	"	
	33	65-72			"	G. A. 1792, pp. 652-3.
	34	73-96		104-121	"	
	35	97-112			"	G. A. 1788, pp. 324-6.
	36†	113-128		122-133	1788	
	37†	129-144			"	G. A. 1788, pp. 324-6.
	38†	145-160		134-139	"	

39†	161-176	140-145	1789	
40	177-192	146-151	1790	
41	193-208	152-155 & 99 B & 105 B	"	
42 }				} G. A. 1792, pp. 660-1.
43 }				
44 }				
45 }				
46 }				
47	321-352	168-177 & 125 B & C	"	
48	353-372	178-183	1793†	
49 }	373-420	184-186	1796	} G. A. 1798, p. 653.
50 }				
51			1798	} A. V., Oster. 1798, p. 150.
52			1799	
53			1804	A. V., Mich. 1799, p. 348.
54			1804	A. V., Oster. 1804, p. 164.
			1805	A. V., Mich. 1804, p. 432.
			[1796]	A. V., Oster. 1805, p. 191.
	1-16			P. 6 out before p. 590 of Th. iv. Bd. 2, Abschn. 1.
	17-36			P. 20 "In dem abgewichenen 1794ten Jahre," and p. 29; and see p. 35. Probably written 1795 and published 1796. E marks end of a part.
	37-54			H marks end of a part.
	55-86			
	1-40	1-4	1794	} P. 36 "dieses 1794sten Jahres."
	41-64	5-10	1795	
	65-88	11-16	1795	G. A. 1798, p. 653; A. V., Oster. 1795, p. 120;
	89-104	17-20	[1795]	Mich. 1795, p. 282.
	105-128			} Pp. 129-148 are omitted, but the signatures are correct; A. V., Oster. 1799, p. 136; Allg. lit. Zeit. 1804, iii. p. 412.
	129-172?		1799	
	-196		1800 §	On p. 170 Esper refers to 1795; A. V., Oster. 1800, p. 151; Oster. 1802, p. 187.
	197-220	36-40	1803	See Brit. Mus. 461. g. 8, with original wrapper.
	221-224	41-46	1806	A. V., Oster. 1806, p. 159.
	225-276			

* ? 112 or 126.

† Fibig and Nau, *Bibl. gesamt. Nat.* 1789-91, agree with these dates and supply numbers of plates.

‡ Michaelmas 1793, Meyer, *Zool. Annalen*, p. 50; A. V., Mich. 1793, p. 266.

§ "Bechstein and Scharfenberg (*Naturg. schädl. Forstinsect.* i. p. 26) give the dates of the work as 1777-1800, and indicate pl. 40 of the 'Spannerphal.' as the last out. They also state at that date [1800] 112 (out of 123) Tagshmett. plates had appeared, 46 (out of 47) Schwärmer., 205 (out of 219) Spinner and Eulen."—L. B. PROUT *in litt.*

Fortsetzung der Tageschmutterlingen :					
1	pp.	1		[1780]	1780 quoted on p. 9; A. V., Oster. 1781, p. 89.
2		— 68		[1780]	1780 quoted on p. 45; A. V., Mich. 1781, p. 206.
3		69-100	pls.	1781	} G. A. 1782, p. 1237, and 1783, p. 592. } G. A. 1784, p. 823. } G. A. 1788, p. 324.
4		101-124		1781	
5		125-140		1782	
7	(pars)	141-157		1783	
		157-184		1786	
		185-190			
Fortsetzung der Abendschmutterlingen :					
6		197-212		1782	} (With text to Heft 14 of main work.) } G. A. 1784, p. 823. } G. A. 1788, p. 324.
7	(pars)	213-228		1783	
		229-234		1786	
Supplement Band. 1 Abschn. Tageschmutterl.:					
	Heft 1	1- 8		1789	} G. A. 1792, p. 653. } G. A. 1798, p. 654.
	3	9- 60		1793	
	5	[no text]		1793	
		61- 88		[1797]	} On O ₄ we read "in dem abgewichenen" sommer's } dieses 1799sten Jahres." } Completed 1805, Engelmann, Hagen.
		89-104		[1799]	
		105-120		[1805]	
Suppl. Band. 2 Abschn. Abendschmutterl.:					
	Heft 2	1- 4		1789	} G. A. 1792, p. 653. } G. A. 1798, p. 654.
	4	5- 16		1793	
		17- 40		[1797]	} On p. 32 "in abgewichenen 1797 Jahre." } Completed 1806, Engelmann; Hagen.
		41- 52		[1806]	
Suppl. Band. 3 Abschn. Nachtschmutterl.:					
	Heft 1	1- 36		1789	} G. A. 1792, p. 653. } G. A. 1798, p. 654.
		[no text]		1793	
		37- 64		[1797]	} P. 91 quotes 1798. } Completed 1807, Engelmann; Hagen.
		65- 94		[1799]	
		95-104		[1807]	
Suppl. Band. 2 Theil. Fortsetzung 1, 2, 3, 4 Theile :					
		1- 8		[1805]	} By T. v. Charpentier.
		9-16		[1805]	
		17-24		1830	
		25-48			

[Ed. 2 is identical with ed. 1, plus xxii pp. of introduction and pp. 25-48 of Suppl. 1-4 Th., which is by Charpentier.]